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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/564,667

01/13/2006

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10/31/2007

EXAMINER

GRANT, ALVIN J

ART UNIT

PAPER NUMBER

3723

MAIL DATE

DELIVERY MODE

10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,667

Applicant(s)

KRAENZLER ET AL.

Examiner

Alvin J. Grant

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 2, 5, 6, 8-10, 11 and 25** are rejected under 35 U.S.C. 102(b) as being anticipated by Scott et al. 4,690,727.

Scott et al. discloses a polishing concurrently an inner surface and an outer surface of a ceramic arc tube; the ceramic arc tube is a non-planar ceramic arc tube; immersing the ceramic arc tube in an abrasive slurry; and impacting the ceramic arc tube with particles suspended in the abrasive slurry; generating a turbulence within the abrasive slurry to facilitate said impacting; wherein polishing a ceramic arc tube comprises polishing a material selected from the group consisting of single crystal ceramics, polycrystalline ceramics, and combinations thereof; and immersing the arc tube in a slurry comprising suspended abrasive particles; generating a turbulence within the slurry such that the abrasive particles are impacted against the inner surface and outer surface of the ceramic arc tube responsive to the turbulence.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 3 and 4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al.

Scott et al. is described above. Scott et al. does not specifically disclose the surface roughness of the tube. Polishing the surface using similar polishing materials and procedures would inherently involve a similar range of surface roughness since in both instances the material being polished is the same.

5. **Claims 7 and 12-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al in view of Sotozaki et al. 6,643,882.

Scott et al. is described above. Scott et al. does not specifically disclose ultrasonic cavitations. Sotozaki et al. teaches the use of ultrasonic cavitations so as to optimize the energy of the bombarding particles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have used ultrasonic cavitations in the slurry of Scott et al. as taught by Sotozaki et al. so as to optimize the energy of the bombarding particles.

6. **Claims 17-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott et al. in view of Woolf et al. 5,108,982.

Scott et al. is described above. Scott et al. does not specifically disclose the use of magnets. Woolf et al. teaches the use of magnets in slurry so as to maintain the particulate concentration at a substantially constant level. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the slurry of Scott et al. to have magnets as taught by Woolf et al. so as to maintain the particulate concentration at a substantially constant level.

Response to Arguments

7. Applicant's arguments filed 8/17/07 have been fully considered but they are not altogether persuasive.

Amendments to claims 1 and 11 comprise functional language which does not add patentable weight to the claims.

In response to applicant's arguments regarding the patentability of the patentability of the instant application over the prior art references WO 03/097299 and WO 03/011527, the claims are read in light of the specification; however, the disclosure of the specification are not read into the claims.

In response to applicant's arguments regarding the double patenting rejection, it is disclosure of the claims and not the specification that is examined.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin J. Grant whose telephone number is (571) 272-4484. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J. Hail can be reached on (571) 272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alvin J Grant
Patent Examiner
Art Unit 3723

ajg

A handwritten signature in black ink, appearing to read "Joseph J. Hail, III".

Joseph J. Hail, III
Supervisory Patent Examiner
Technology Center 3700